

## Biographies of BlackLight Power, Corporation Employees

### XUEMIN CHEN, PH.D.

Dr. Chen, graduated from Brigham Young University, Provo, Utah with a Ph.D. in Chemistry. Dr. Chen has extensive knowledge and hands-on experience in various calorimetric and thermal analysis techniques, and has designed and constructed calorimeters. At BLP, Dr. Chen is responsible for designing a water bath calorimeter, performs calorimetry research, and studies the heat generated by the BlackLight Process. Dr. Chen is a member of the American Chemical Society and Sigma Xi, The Scientific Research Society. Dr. Chen has twenty-four (24) publications and has presented at twenty-one (21) conferences.

### ETHIRAJULU DAYALAN, PH.D.

Dr. Dayalan, Staff Electrochemist, graduated with a Ph.D. in Electrochemistry from the Indian Institute of Technology, Madras, India, and brings to BlackLight Power, Inc. (BLP) over 20 years of research and development experience in batteries, industrial electrochemical processes, electrode kinetics, electrocatalysis, corrosion, materials synthesis and surfactant systems. At BLP, Dr. Dayalan is responsible for the development of a battery using the Company's novel hydride technology. In so doing, he studies electrochemical properties of proprietary inorganic hydrides, including formulating and characterizing compounds, and studying compounds in test cells. Dr. Dayalan is a member of the Electrochemical Society, the Society for Advancement of Electrochemical Science and Technology, and the American Chemical Society. He has over thirty-five (35) publications and has presented in over thirty-five (35) conferences.

### BALA DHANDAPANI, PH.D.

Dr. Dhandapani, Director, Chemical Synthesis and Analysis, graduated with a Ph.D. in Chemical Engineering from Clarkson University, Potsdam, NY, and brings to BlackLight Power, Inc. (BLP) expertise in the areas of synthesis, characterization and testing of novel materials. Dr. Dhandapani is responsible for coordinating the research efforts at BLP and serves as liaison between Program Managers and BLP's President. In addition, Dr. Dhandapani is responsible for characterization of novel materials and optimization of the BlackLight Process. Dr. Dhandapani is a member of the American Chemical Society and the Catalysis Society of New York. He has twenty (20) publications and has presented at ten (10) conferences.

### JINQUAN DONG, PH.D.

Dr. Dong, Research Scientist, graduated with a Ph.D. in Chemistry from the City University of New York, and brings to BlackLight Power, Inc. (BLP) extensive knowledge of chemistry, spectroscopy and materials analysis. At BLP, Dr. Dong is responsible for studying the heat generated by the BlackLight Process using various calorimetric techniques. Dr. Dong is a member of the American Chemical Society and the Materials Research Society. He has published ten (10) research papers and has presented at eight (8) national and international meetings.

JILIANG HE, PH.D.

Dr. He, Manager, TOF-SIMS and XPS Program, graduated with a Ph.D. in Analytical Inorganic Chemistry from McGill University, Montreal, Canada, and brings to BlackLight Power, Inc. (BLP) extensive knowledge in synthesis, structural analysis and property characterization. At BLP, Dr. He is responsible for various analytical tests, data interpretation, synthesis of novel silicon compounds, and supports the spectroscopy studies of the BLP photoemission process. Dr. He is a member of the American Chemical Society. He has published twenty-seven (27) research papers in scientific journals and has presented at more than twenty (20) national and international scientific conferences.

ROBERT MAYO, PH.D.

Dr. Mayo, Director, Plasma-to-Electric Conversion Program, graduated from Purdue University with a Ph.D. in Nuclear Engineering. Dr. Mayo served most recently on the faculty in the Department of Nuclear Engineering at North Carolina State University, where, among other responsibilities, he served as Director of Graduate Programs. His most recent research and professional activities include: Pulsed Laser Evaporated (PLE) plasmas for advanced materials production; imaging, spectroscopic and particle plasma diagnostics for thin film heterostructures using Pulsed Laser Deposition; magnetized PLE plasma for plume control and controlled deposition. At BLP, Dr. Mayo provides expertise in the detailed characterization of chemically-driven plasma, as well as leadership in the analysis, design, and development of a plasma-to-electric conversion prototype. Dr. Mayo is a member of the American Physical Society-Division of Plasma Physics, the Fusion Power Associates, the American Nuclear Society, and the American Association for the Advancement of Science. He has published a book Introduction to Nuclear Concepts for Engineers, has published 37 journal articles, has made 72 conference presentations, and has completed 32 invited research presentations.

MARK NANSTEEL, PH.D.

Dr. Nansteel, Director, Plasma Cell Engineering, graduated with a Ph.D. in Mechanical Engineering from the University of California, Berkeley, and brings to BlackLight Power, Inc. (BLP) extensive expertise in heat and mass transfer/fluid dynamics. At BLP, Dr. Nansteel is primarily responsible for the characterization, optimization and development of the BlackLight Process. Dr. Nansteel is a member of the American Society of Mechanical Engineers and the Society for Industrial and Applied Mathematics. He has published seventeen (17) journal articles and has presented at three (3) conferences.

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### PARESH RAY, PH.D.

Dr. Ray, Research Scientist, achieved his Ph.D. in Physical Chemistry from the Indian Institute of Science, Bangalore, India, where he studied nonlinear optical properties of polymeric, organic and organometallic materials. His post-doctoral work at the University of Chicago included photodissociation dynamics by molecular beam emission spectroscopy. At Columbia University, his post-doctoral work included reaction dynamics using molecular beam TOF/REMPI/Doppler spectroscopy. At BLP, Dr. Ray has been working on plasma dynamics of hydrogen-catalyzed plasma by EUV, VUV, UV-Visible and Doppler broadening spectroscopy. He is a member of the American Chemical Society. Dr. Ray has published twenty-eight (28) journal articles and has presented papers at eight (8) international symposia.

### JAYASREE SANKAR, PH.D.

Dr. Sankar, Research Scientist, attained her Ph.D. in Metallorganic/Materials Chemistry from the University of Western Ontario, Canada. Her doctoral research at Western was "Chemical Vapor Deposition of Transition Metal and Metal Oxide Thin Films". Dr. Sankar brings to BlackLight Power, Inc. (BLP) a thorough understanding of chemical analytical techniques. At BLP, Dr. Sankar performs research and development work related to thick and thin films of hydride compounds on surfaces whereby she is preparing, characterizing and developing commercial applications of useful hydride films. Dr. Sankar is a member of the American Chemical Society and the Chemical Institute of Canada. She has published in over ten (10) refereed journals, and has made more than eight (8) presentations at international conferences.

### ANDREAS VOIGT, PH.D.

Dr. Voigt, Senior Research Scientist, graduated summa cum laude in Chemistry from Georg-August University of Göttingen, Germany, on his doctoral thesis "Synthesis, Structure and Catalytic Reactivity of Metallasiloxanes-Model Compounds for Metal Doped Zeolites." Dr. Voigt brings expertise in synthetic and analytical chemistry to BlackLight Power, Inc. (BLP) where he conducts synthesis, isolation, purification and identification of novel inorganic chemicals in bench scale experiments. Dr. Voigt investigates chemical processes and reactions in high-temperature materials. Dr. Voigt is a member of the American Chemical Society. He has published one (1) book, one (1) book chapter, over twenty-nine (29) journal articles and has presented at six (6) international conferences.